

Fats, Oil, & Grease (FOG) The Basics

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What is FOG?

What are the Primary Sources?

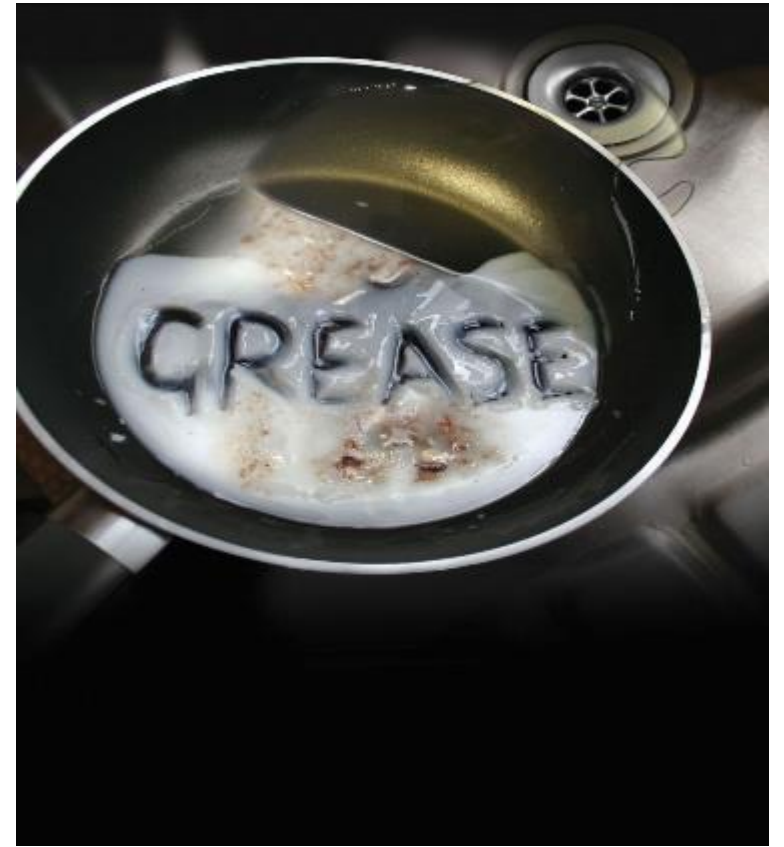
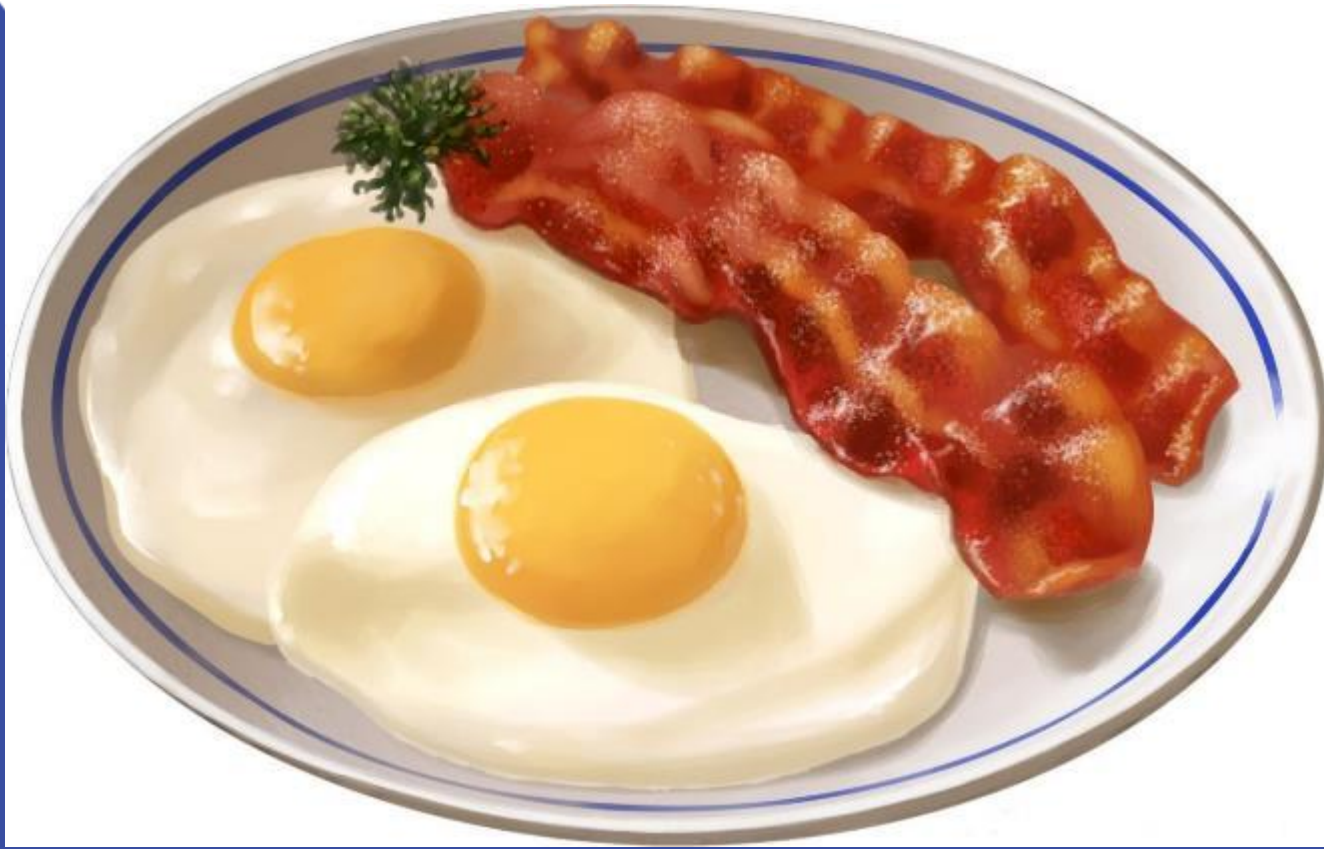
What is the Regulation?

What Can We Do?

FOG as a Solid Waste Issue

FOG Seattle/SPU Program Future Initiatives

Fats, Oil, and Grease (FOG) from food preparation often ends up going down the drain



Where it causes buildups and blockages that can lead to sewer overflows



And backups into homes and businesses..



Primary Sources of FOG

Floor cleaning



Primary Sources of FOG

Pre-wash Sinks & Food Grinders



Primary Sources of FOG

Poorly Implemented Best Management Practices (BMPs)

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The Statistics



- 400-500 miles of line cleaning/year
- 981 miles-58% of pipe = some FOG impact (535 Miles - 32% significantly)
- Priority 1 Hotspots 8X more SSOs/mile than citywide average
- 50-60% increase in FOG to sewer over next 15 years due to projected growth and increased density

What is required - Seattle Municipal Code (SMC) 21.16.310

- Discharge of FOG is prohibited (Visible Accumulations) or discharge greater than 100 PPM.
- You Must have a Grease Removal Device (GRD)
 - Capacity
 - Readily accessible for Maintenance/Inspection
- GRD Must be fully operational at all times
- GRD Must be maintained (25% rule)
- Use of Additives/Emulsifiers is Prohibited

What can we do?

- Properly size and install Grease Removal Device (GRD)
- Connect all FOG Producing Drains to Grease Removal Device
- Remove Food Grinder
- Incorporate BMPs
- Maintain Interceptor and Keep Log
- Do not Use Enzymes/Additives

Properly size and install Grease Removal Device (GRD)

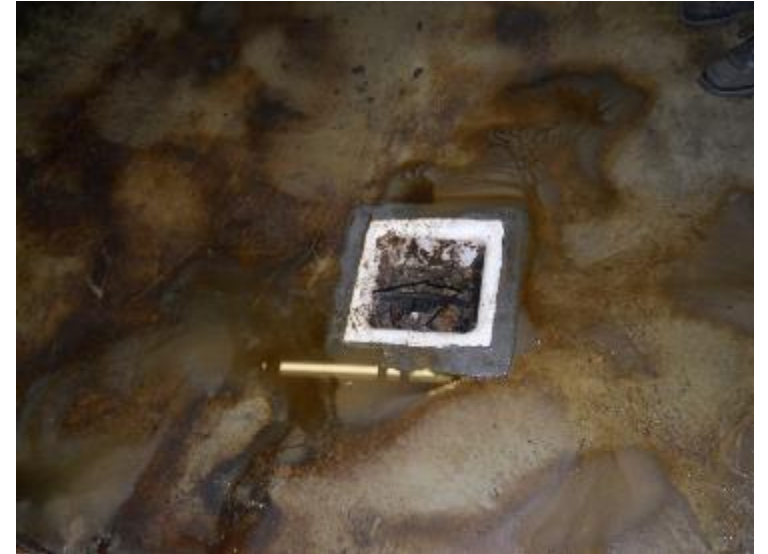


- Become familiar with Chapter 10 of the Seattle Plumbing Code
- When designing installation consider:
 - Grease Production
(Smaller isn't always cheaper)
 - Ease of access
(Easy Install doesn't mean easy maintenance)



Connect all FOG Producing Drains to Grease Removal Device

- Three compartment sinks (Dish washing)
- Pre-wash sinks
- Two compartment sinks (food prep)
- Mop/Floor sinks
- Floor Drains



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Remove Food Grinder



Incorporate BMPs



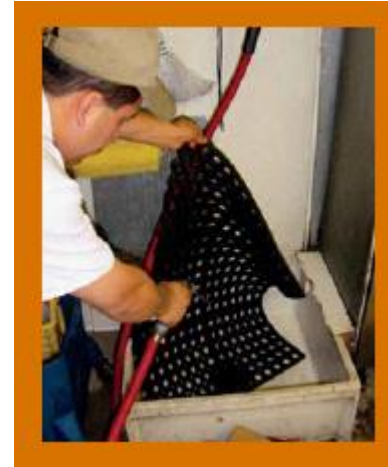
- Train Staff!!
- Post BMP Signage
- Scrape and Wipe before washing
- Collect used oil for recycle
- Wash mats in sink connected to trap (NEVER OUTSIDE)
- Keep Screens in all drains
- Keep a spill kit handy
- Train Staff!!



- Scrape and Wipe Dishes prior to washing



- Clean Floor mats inside or hire a professional



- Compost Food Waste

- Collect Used Oil

BMP Don'ts

- Keep food waste out of drains



- Do not put waste oil down drains



- Always keep waste oil covered and protected from elements



- Do not put compost in trash



- Do not wash floor mats outside of building footprint



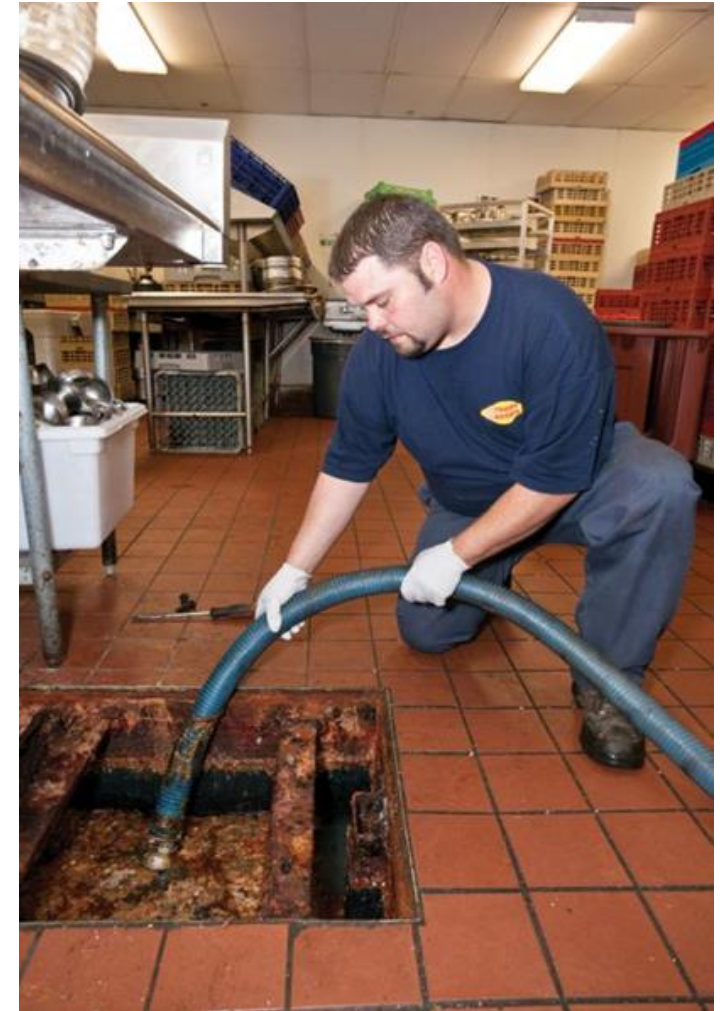
The Use of Enzymes and Additives is prohibited in Seattle (SMC 21.16.210.D)

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Maintain Interceptor and Keep Log

25% rule –SMC 21.16.310c., a grease interceptor is not in continuously efficient operation and is in violation of this chapter if the total volume of grease, solids, or food waste at any time displaces more than twenty-five percent of the effective volume of any chamber of the grease interceptor.



25% Rule Explained

$$\frac{\text{Grease + Bottom Solids}}{\text{Total depth}} = \% \text{ Grease/Solids}$$



Happy to help...

$$\frac{4 + 4}{15} = .53 \text{ or } 53\%$$

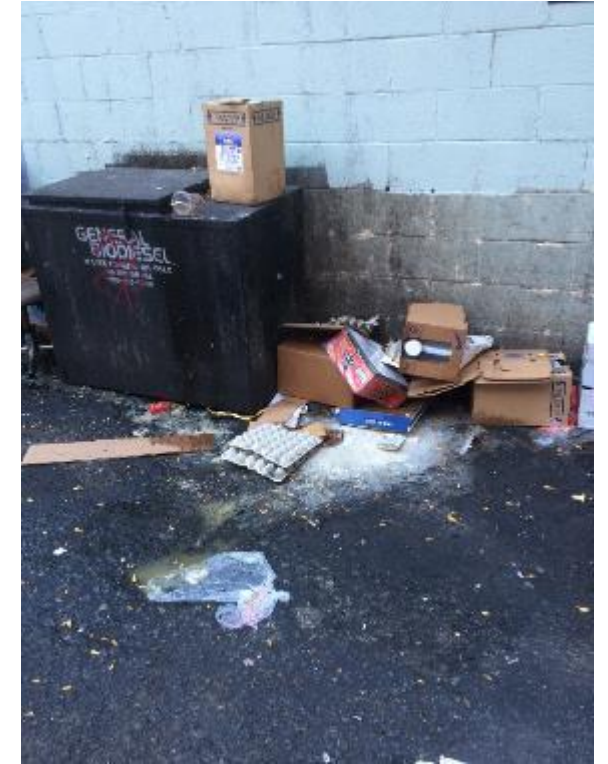
Total 15"



Grease 4"

Solids 4"

Grease as a Solid Waste Issue – The Problem



FOG as a Solid Waste Issue – The Solution



Dry wipe dishes
prior to washing



Compost all food
Scraps and waste



Collect waste oil
and store for
recycling



No cooking oil or
food waste in drain



Avoid using the
garbage disposal



Do not leave lids open
on waste oil containers

FOG as a Solid Waste Issue – The Consequences



FOG as a Solid Waste Issue – The Consequences



Do not let this happen to you!

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FOG as a Solid Waste Issue – Directed Actions

- Residential Customers
 - Cool it, Can it, Trash it
 - Do not compost
- Commercial Customers
 - Service provider – Pump, Haul, Dispose
 - Self cleaned – Solidify & Trash
 - Future beneficial reuse???



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Future Initiatives – Program Restructure

The Problem

The worst misstep one
can make in design is to
solve the wrong problem

John Carroll

PICTUREQUOTES.COM

PICTUREQUOTES.COM

~~“The regulation is in place but restaurants aren’t doing what is required.”~~

The regulation is in place but it is:

- *Not clear*
- *Difficult to find*
- *not communicated well*
- *not enforced adequately or uniformly.*

Future Initiatives – Program Restructure

The Goals



..to change customer relationship from adversary to partner.

By making customers aware of costs & program requirements upfront...

We will increase awareness of code requirements before business open from current 40% to 85%



..to increase FOG inspector efficiency

By Ensuring GI sized, installed, and maintained so that inspector's focus changes from enforcing code to confirming code compliance.

We will Reduce inspector enforcement time from between 50 to 70% to between 5 to 10% by 2033.



...to reduce Drainage & Wastewater Line of Business risk.

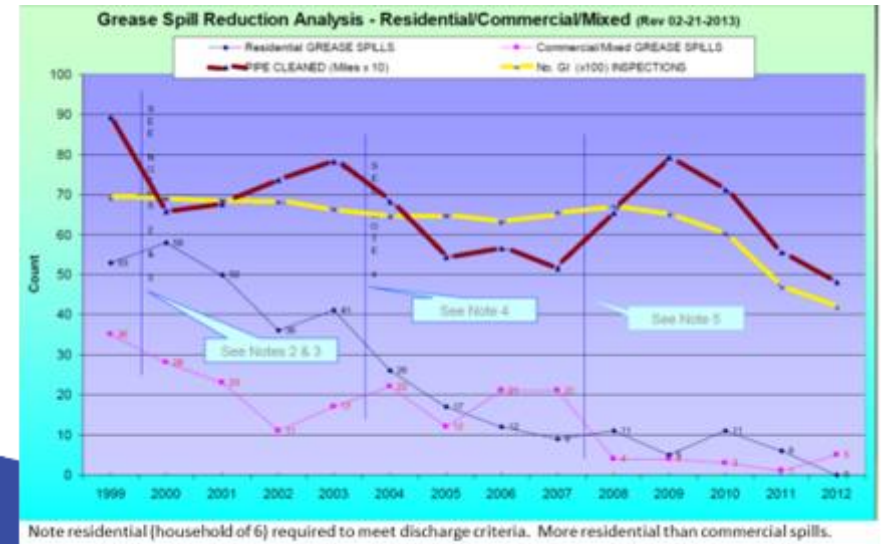
By solving problems at the source.

We will reduce grease entering system from 50% more than current to 20% more than current by 2033.

Future Initiatives – Program Restructure

The Solutions

1. Clarify Code – Develop a Director’s Rule
2. Identify & Educate Restaurants – Registration Program
3. Improve Industry Knowledge – Plumbers/Service Industry Training Program
4. Build it Right – Improved Plan Review Process
5. Improve Inspector Efficiency – Maintenance Record Submittal
6. Partner with Community – Expand Outreach & Education
7. Measure Outcomes – Develop Program Metrics



Bonus! Gratuitous Gross Pictures from some of your favorite Seattle eateries



Questions?



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